



February 23, 2010

Ms. Jocelyn Boyd
Interim Chief Clerk and Administrator
South Carolina Public Service Commission
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.
Power Plant Performance Report
Docket No. 2006-224-E

Dear Ms. Boyd:

Enclosed is the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of January 2010.

Sincerely,

/s/

Len S. Anthony
General Counsel
Progress Energy Carolinas, Inc.

LSA/dhs
Attachment
45612

c: John Flitter (ORS)

January 2010

The following units had no off-line outages during the month of January:

Brunswick Unit 1

Harris Unit 1

Robinson Unit 2

Mayo Unit 1

Roxboro Unit 3

Brunswick Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 17:43 on January 10, and was returned to service at 1:14 on January 11, a duration of 7 hours and 31 minutes.
- B. Cause: Electro-Hydraulic Control (EHC) fluid leak from Valve Actuator
- C. Explanation: Following turbine valve testing on January 9, a 2.3 gallon-per-minute EHC fluid leak was discovered at the Disc Dump to Actuator Body bolted joint on 2-MS-SV-4 hydraulically-operated actuator. The leak was monitored while a response team evaluated continued operation or a shutdown to expedite repairs. Based on weather forecast and expected increase in system loads later in the week, the response team and management, in conjunction with the system dispatcher, determined the best course of action was to remove the turbine and expedite repairs, ensuring the unit's reliability.
- D. Corrective Action: The turbine was removed from service and the Disc Dump valve and o-rings were replaced. After the other Turbine Stop Valves and Control Valves were inspected and no leaks were found, the turbine was reconnected to the grid.

Roxboro Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 10:29 on January 13, and was returned to service at 0:51 on January 15, a duration of 38 hours and 22 minutes.
- B. Cause: Boiler Tube Leak
- C. Explanation: The unit was taken out of service to investigate and repair a tube leak in the superheater section of the boiler.
- D. Corrective Action: Weld repairs were made to correct the boiler tube leak, and the unit was returned to service.

Roxboro Unit 4

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 0:02 on January 16, and was returned to service at 12:39 on January 16, a duration of 12 hours and 37 minutes.
- B. Cause: Generator Bushing Repair
- C. Explanation: The unit was take out of service to perform maintenance on the “B” phase generator bushing.
- D. Corrective Action: Preventative and corrective maintenance activities were conducted on the generator bushing. Upon completion of maintenance work, the unit was returned to service.

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	975 MW		941 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	697,435 MWH		8,003,972 MWH		2
Capacity Factor	96.14 %		97.09 %		
Equivalent Availability	97.69 %		95.79 %		
Output Factor	96.14 %		100.13 %		
Heat Rate	10,376 BTU/KWH		10,436 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	0	0.00	3
Partial Scheduled	16,721	2.31	46,159	0.56	4
Full Forced	0	0.00	249,696	3.03	5
Partial Forced	11,244	1.55	62,726	0.76	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	725,400		8,243,890		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	953 MW		923 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	685,924 MWH		6,396,613 MWH		2
Capacity Factor	96.74 %		79.13 %		
Equivalent Availability	96.96 %		77.85 %		
Output Factor	97.73 %		98.27 %		
Heat Rate	10,515 BTU/KWH		10,642 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	455,982,933	5,641.06	3
Partial Scheduled	6,652	0.94	45,862	0.57	4
Full Forced	7,164	1.01	232,840	2.88	5
Partial Forced	9,292	1.31	172,538	2.13	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	709,032		8,083,290		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	936 MW		903 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	690,254 MWH		7,399,606 MWH		2
Capacity Factor	99.12 %		93.54 %		
Equivalent Availability	99.11 %		91.55 %		
Output Factor	99.12 %		101.27 %		
Heat Rate	10,560 BTU/KWH		10,709 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	495,270	6.26	3
Partial Scheduled	6,197	0.89	58,641	0.74	4
Full Forced	0	0.00	105,870	1.34	5
Partial Forced	0	0.00	6,844	0.09	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	696,384		7,910,280		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	758 MW		714 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	568,020 MWH		6,472,622 MWH		2
Capacity Factor	100.72 %		103.49 %		
Equivalent Availability	99.96 %		98.64 %		
Output Factor	100.72 %		104.58 %		
Heat Rate	10,438 BTU/KWH		10,662 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	33,335	0.53	3
Partial Scheduled	0	0.00	8,880	0.14	4
Full Forced	0	0.00	32,044	0.51	5
Partial Forced	237	0.04	10,254	0.16	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	563,952		6,254,640		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	726 MW		741 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	474,175 MWH		4,088,580 MWH		2
Capacity Factor	87.79 %		63.02 %		
Equivalent Availability	100.00 %		88.22 %		
Output Factor	87.79 %		73.11 %		
Heat Rate	10,462 BTU/KWH		10,730 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	662,075	10.20	3
Partial Scheduled	0	0.00	45,761	0.71	4
Full Forced	0	0.00	19,329	0.30	5
Partial Forced	0	0.00	38,287	0.59	6
Economic Dispatch	65,969	12.21	1,633,984	25.18	7
Possible MWH	540,144		6,488,240		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	671 MW		663 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	425,181 MWH		4,229,592 MWH		2
Capacity Factor	85.17 %		72.85 %		
Equivalent Availability	90.51 %		85.57 %		
Output Factor	89.80 %		83.31 %		
Heat Rate	8,767 BTU/KWH		8,900 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	386,057	6.65	3
Partial Scheduled	3,971	0.80	51,074	0.88	4
Full Forced	25,744	5.16	315,800	5.44	5
Partial Forced	17,667	3.54	84,579	1.46	6
Economic Dispatch	26,661	5.34	738,715	12.72	7
Possible MWH	499,224		5,805,690		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	698 MW		695 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	401,882 MWH		3,792,656 MWH		2
Capacity Factor	77.39 %		62.27 %		
Equivalent Availability	96.96 %		92.09 %		
Output Factor	77.39 %		66.21 %		
Heat Rate	11,019 BTU/KWH		10,798 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	362,106	5.95	3
Partial Scheduled	0	0.00	50,239	0.82	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	15,780	3.04	69,234	1.14	6
Economic Dispatch	101,650	19.57	1,816,197	29.82	7
Possible MWH	519,312		6,090,390		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

	Month of January 2010		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	711 MW		699 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	448,587 MWH		4,393,382 MWH		2
Capacity Factor	84.80 %		71.74 %		
Equivalent Availability	98.30 %		93.53 %		
Output Factor	86.26 %		75.90 %		
Heat Rate	11,837 BTU/KWH		11,719 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	8,971	1.70	293,219	4.79	3
Partial Scheduled	0	0.00	24,714	0.40	4
Full Forced	0	0.00	5,596	0.09	5
Partial Forced	43	0.01	72,176	1.18	6
Economic Dispatch	71,384	13.49	1,335,065	21.80	7
Possible MWH	528,984		6,123,970		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

** Gross of Power Agency

NOTES FOR FOSSIL UNITS

1. Maximum Dependable Capacity (MDC) in MW: The gross electrical output measured at the output terminals of the turbine generator, during the most restrictive seasonal conditions, minus the normal station service loads.
2. MWH Generated in the Period: The gross electrical output measured at the output terminals of the turbine generator, minus the normal station service loads, during the gross hours of the reporting period.
3. MWH Not Generated Due to Full Scheduled Outages: Calculated by multiplying the full scheduled outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not be required (due to economic dispatch), the actual MWH not generated due to the outage would be less.
4. MWH Not Generated Due to Partial Scheduled Outages: Calculated by multiplying the partial scheduled outage hours by the MW derating (as reported to NERC). Also included is an estimate of the MWH not generated while reducing power to take the unit off line for a full scheduled outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
5. MWH Not Generated Due to Full Forced Outages: Calculated by multiplying the full forced outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not have been required (due to economic dispatch), the actual MWH not generated due to the outage would be less.

6. MWH Not Generated Due to Partial Forced Outages: Calculated by multiplying the partial forced outage hours by the MW derating (as reported to NERC). Included is an estimate of the MWH not generated while reducing power to take the unit off line for a full forced outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
7. MWH Not Generated Due to Economic Dispatch: Included is an estimate of the MWH not generated due to the unit not being in demand on a System Dispatch basis. System dispatch takes into consideration the reliability and stability of the system as well as economic dispatch since consideration must be given to the mix of generation on line at any one point in time. Also included are estimates of the MWH not generated due to plant conditions (not defined by NERC), which occur from time to time such as: high backpressure, silica in boiler water, phosphate water treatment carryover, instrumentation calibration, and equipment testing.
8. Total MWH Possible in Period: Calculated by multiplying MDC by hours in period.

NOTES FOR NUCLEAR UNITS

1. Maximum Dependable Capacity (MDC) in MW: The gross electrical output measured at the output terminals of the turbine generator, during the most restrictive seasonal conditions, minus the normal station service loads.
2. MWH Generated in the Period: The gross electrical output measured at the output terminals of the turbine generator, minus the normal station service loads, during the gross hours of the reporting period.
3. MWH Not Generated Due to Full Scheduled Outages: Calculated by multiplying the full scheduled outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
4. MWH Not Generated Due to Partial Scheduled Outages: Calculated by multiplying the partial scheduled outage hours by the MW derating (as reported to NERC). Also included is an estimate of the MWH not generated while reducing power to take the unit off line for a full scheduled outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
5. MWH Not Generated Due to Full Forced Outages: Calculated by multiplying the full forced outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage.

6. MWH Not Generated Due to Partial Forced Outages: Calculated by multiplying the partial forced outage hours by the MW derating (as reported to NERC). Included is an estimate of the MWH not generated while reducing power to take the unit off line for a full forced outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). Also included are estimated of the MWH not generated due to plant conditions (not defined by NERC) which occur from time to time such as: preconditioning of fuel, excessive cooling water temperature, and off-peak equipment testing required by the NRC. However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
7. MWH Not Generated Due to Economic Dispatch: Included is an estimate of the MWH not generated due to the unit not being fully in demand based on system load conditions. Also included is the MWH not generated on the nuclear plants due to fuel limitations in the cores or the fuel being “stretched” to meet refueling outages.
8. Total MWH Possible in Period: Calculated by multiplying MDC by hours in period.

Plant	Unit	Current MW Rating	January 2009 - December 2009	January 2010	January 2010 - January 2010
Asheville	1	196	70.87	74.47	74.47
Asheville	2	187	59.45	73.22	73.22
Cape Fear	5	148	63.73	76.03	76.03
Cape Fear	6	175	62.21	86.06	86.07
Lee	1	80	50.63	84.98	84.98
Lee	2	80	41.80	71.24	71.24
Lee	3	257	58.82	83.54	83.55
Mayo	1	726	62.45	87.79	87.79
Robinson	1	179	61.18	83.88	83.88
Roxboro	1	374	79.40	85.39	85.39
Roxboro	2	671	73.67	85.17	85.17
Roxboro	3	698	62.76	77.39	77.39
Roxboro	4	711	71.40	84.80	84.80
Sutton	1	98	39.14	67.82	67.82
Sutton	2	107	44.65	60.00	60.00
Sutton	3	411	48.01	57.24	57.24
Weatherspoon	1	49	13.92	57.02	57.03
Weatherspoon	2	49	14.93	62.21	62.22
Weatherspoon	3	79	23.59	64.61	64.61
Fossil System Total		5,275	62.52	79.29	79.29
Brunswick	1	975	97.67	96.14	96.15
Brunswick	2	953	79.50	96.74	96.74
Harris	1	936	93.90	99.12	99.12
Robinson Nuclear	2	758	104.08	100.72	100.72
Nuclear System Total		3,622	93.18	98.03	98.03
Total System		8,897	74.79	86.92	86.92

Amended SC Fuel Rule
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of $\geq 92.5\%$ during the 12 month period under review. For the test period April 1, 2009 through January 31, 2010, actual period to date performance is summarized below:

Period to Date: April 1, 2009 to January 31, 2010

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period	A =	23,941,239 MWH
B. Total number of hours during SCPSC test period	B =	7,345 hours
C. Nuclear system MDC during SCPSC test period (see page 2)	C =	3,468 MW for 2009 3,482 MW for 2010
D. Reasonable nuclear system reductions (see page 2)	D =	2,139,755 MWH
A. SC Fuel Case nuclear system capacity factor: $[(A + D) / (B + C)] * 100 =$		
		102.3%

NOTE:

If Line Item E $> 92.5\%$, presumption of utility's minimum cost of operation.

If Line Item E $< 92.5\%$, utility has burden of proof of reasonable operations.

Note: Robinson Unit 2 MDC value was increased by 14 MW, effective 1/1/10, primarily reflecting the impact of changes associated with calculation methods (NERC requires annual evaluation of environmental and operational parameters; former process used three to five-year average), environmental monitoring and compliance, and the impact of equipment degradation.

Amended SC Fuel Rule
Nuclear System Capacity Factor Calculation
Reasonable Nuclear System Reductions
Period to Date: April 1, 2009 to January 31, 2010

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC (April - December 2009)	938 MW	920 MW	900 MW	710 MW	3,468 MW
Unit MDC (January - March 2010)	938 MW	920 MW	900 MW	724 MW	3,482 MW
Reasonable refueling outage time (MWH)	0	632,331	495,270	0	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	298,829	385,419	113,189	81,561	
Reasonable coast down power reductions (MWH)	0	0	24,856	0	
Reasonable power ascension power reductions (MWH)	13,400	40,302	25,920	0	
Prudent NRC required testing outages (MWH)	11,976	16,474	228	0	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	0	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	324,205	1,074,526	659,463	81,561	
Total reasonable outage time exclusions [carry to Page 1, Line D]					2,139,755